



# Missouri Department of Health and Senior Services

## State Public Health Laboratory

101 N. Chestnut, Jefferson City, MO 65101

573-751-3334

[www.health.mo.gov/lab/index.php](http://www.health.mo.gov/lab/index.php)



## BACTERIOLOGICAL ANALYSIS FOR DRINKING WATER

This bacteriological water analysis was made in accordance with methodology described in the latest edition of the American Public Health Association's *Standard Methods for the Examination of Water and Wastewater*, and complies with U.S. Environmental Protection Agency standards and Missouri Department of Health and Senior Services guidelines for bacteria in drinking water. This drinking water sample was analyzed for the presence of total coliform and *E. coli* bacteria. The following information describes these bacteria:

### TOTAL COLIFORM BACTERIA

Since it is too costly to test water samples for every possible organism that may cause disease, the coliform group of bacteria are used as an indicator of water quality and to determine suitability for drinking water purposes. Coliforms are a group of bacteria found in the intestines of humans and other animals. Coliforms also occur naturally in the environment, including in soil, on vegetation and in surface waters such as lakes, rivers and streams. Most members of the coliform group do not cause disease. When found in drinking water, coliform bacteria indicate that contamination of the drinking water supply has occurred, and that other disease causing bacteria could also get into the water supply.

### *E. coli*

*Escherichia coli* (*E. coli*) is a member of the coliform group of bacteria and is found only in the intestines of warm-blooded animals, including humans. When found in drinking water, *E. coli* indicates the water has been contaminated with human or animal wastes (feces). Possible sources of contamination include leaking septic systems, surface water leaking into structural defects (cracks) in the well's casing or pipes to the house, and runoff from agricultural lots.

## EXPLANATION OF POSSIBLE LABORTORY RESULTS

**Refer to the attached PRIVATE DRINKING WATER BACTERIOLOGICAL ANALYSIS report (Laboratory Results section near the bottom) for your actual sample test results.**

The explanations below describe each of the possible results for your drinking water test, and provide an interpretation with regards to the suitability for drinking water purposes:

**Total Coliform and *E. coli* ABSENT:** Coliform and *E. coli* bacteria were not detected in the sample tested. Sample is considered SATISFACTORY for drinking water purposes.

**Total Coliform PRESENT:** Coliform bacteria were detected in the sample tested. Sample is considered UNSATISFACTORY for drinking water purposes.

***E. coli* PRESENT:** *E. coli* bacteria were also detected in the sample tested. Sample is considered UNSATISFACTORY for drinking water purposes. Presence of *E. coli* bacteria indicates fecal contamination of the water supply has occurred. An increased risk to the health of those consuming the water may exist, as other disease causing bacteria from feces may have entered the water supply.

(over)

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**UNSATISFACTORY FOR TESTING:** Each sample is considered on its own merits. Examples of samples that have to be rejected for analysis include samples that have been collected in improper containers, samples that exceed the holding time (public water supply samples that are received in the laboratory more than 30 hours after collection, or private well samples that are received in the laboratory more than 48 hours after collection), samples that have detectable chlorine present, samples with insufficient quantity (must be 100 ml), inaccurate or incomplete information (such as missing date or time collected) on the accompanying sample information form, or a sample collected from a source other than a drinking water supply. If standard methodology for sample collection and maintaining sample integrity is not followed as explained on the sample collection instruction form, the sample may be deemed unacceptable for testing.

**INDETERMINANT:** The laboratory technician was unable to determine your sample's test results. This may be due to chemicals or other contaminants in your water sample that interfere with the test. In this case, you are asked to collect and submit another sample for testing.

#### **YOUR DEPARTMENT OF HEALTH AND SENIOR SERVICES CAN HELP**

The safety of a water supply depends upon proper construction and protection against contamination. A favorable bacteriological analysis alone should not be accepted as conclusive evidence of the safety of a water supply. It is recommended that a sealed water supply used for drinking purposes be analyzed routinely and an Environmental Public Health Specialist be asked to survey on-site for defects. Contact your local health department, or the Missouri Department of Health and Senior Services for assistance.

Instructions for the proper disinfection of wells are available at no charge from the Department of Health and Senior Services. If your test result was UNSATISFACTORY for drinking water purposes, these instructions are attached. Additional assistance and information may be obtained by contacting your city or county health department's environmental health section.

Construction and registration of new wells is covered under the water well law that is administered by the Department of Natural Resources, Geological Survey Division, Well Head Protection Section. They can be contacted at 573-361-4827 or on-line at <http://dnr.mo.gov/geology/geosrv/wellhd/index.html>.

For additional information on private drinking water supplies, please contact the following:

#### **MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES**

**Bureau of Environmental Health Services  
1-800-392-0272**

**State Public Health Laboratory  
Environmental Bacteriology Unit  
1-573-751-3334**

Or your local city or county public health agency's environmental public health section.  
A listing of these agencies may be found on-line at <http://health.mo.gov/living/lpha/lphas.php>

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